



Colorado Department
of Public Health
and Environment

**COLORADO DISCHARGE PERMIT SYSTEM (CDPS)
FACT SHEET FOR PERMIT NUMBER CO0048151
CITY OF RIFLE RIFLE REGIONAL WASTEWATER
RECLAMATION FACILITY, GARFIELD COUNTY**

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I. TYPE OF PERMIT

- A. Permit Type:** Domestic - Major Municipal, Mechanical Plant, First Renewal
- B. Discharge To:** Surface Water

II. FACILITY INFORMATION

- A. SIC Code:** 4952 Sewerage Systems
- B. Facility Location:** 2515 W. Centennial Parkway, Rifle, CO 81650, Latitude: 39.5261° N, Longitude: -107.81208° W
- C. Permitted Feature:** 001A, following disinfection and prior to mixing with the receiving stream. Latitude: 39.5213° N, Longitude: -107.81081° W
- The location(s) provided above will serve as the point(s) of compliance for this permit and are appropriate as they are located after all treatment and prior to discharge to the receiving water.
- D. Facility Flows:** 2.0 MGD
- E. Major Changes From Last Renewal:**
- Ammonia AMMTOX model changed from CAM.
 - The Division will require the facility to establish an in-stream monitoring station within a mile or two upstream (the most suitable and representative location) from the facility discharge to collect ambient temperature data to be used in the next renewal. For this, the Division included an outfall (UST1A) in the permit and added a short delayed effective date for starting to collect data.
 - The Division added total metals sampling and analysis requirements in the permit (Part I.B.F). For the reporting purposes, the Division added a limit set 'P' to allow data entry to ICIS.
 - A salinity report to address salt loading has been added to the permit based on raw water TDS results from January 2003 to January 2008(Part I.A.5.b).

III. RECEIVING STREAM

A. Waterbody Identification: COLCLC01, the Colorado River

B. Water Quality Assessment:

An assessment of the stream standards, low flow data, and ambient stream data has been performed to determine the assimilative capacities for the Colorado River for potential pollutants of concern. This information, which is contained in the Water Quality Assessment (WQA) for this receiving stream(s), also includes an antidegradation review, where appropriate. The Division's Permits Section has reviewed the assimilative capacities to determine the appropriate water quality-based effluent limitations as well as potential limits based on the antidegradation evaluation, where applicable. The limitations based on the assessment and other evaluations conducted as part of this fact sheet can be found in Part I.A of the permit.

Permitted Feature 001A will be the authorized discharge point to the receiving stream.

IV. FACILITY DESCRIPTION

A. Infiltration/Inflow (I/I)

No infiltration/inflow problems have been documented in the service area.

The City conducts routine sanitary sewer cleaning in known problem areas.

B. Lift Stations

Table IV-1 summarizes the information provided in the renewal application for the lift stations in the service area.

Table IV-1 – Lift Station Summary

Station Name/#	Firm Pump Capacity (gpm)	Peak Flows (gpd)	% Capacity (based on peak flow)
South Rifle	2 @ 350 gpm	330,000	33%

C. Chemical Usage

The permittee did not specify any chemicals for use in waters that may be discharged. On this basis, no chemicals are approved under this permit. Prior to use of any applicable chemical, the permittee must submit a request for approval that includes the most current Material Safety Data Sheet (MSDS) for that chemical. Until approved, use of any chemical in waters that may be discharged could result in a discharge of pollutants not authorized under the permit. Also see Part II.A.1. of the permit.

Chemicals deemed acceptable for use in waters that will or may be discharged to waters of the State are acceptable only when used in accordance with all state and federal regulations, and in strict accordance with the manufacturer's site-specific instructions.

D. Treatment Facility, Facility Modifications and Capacities

The facility consists of fine mechanical screening with manual bar screen bypass, grit removal system, flow measurement, activated sludge oxidation ditch, two interchange tanks which make up the Interchange Activated Sludge treatment, three secondary clarifiers, UV disinfection, and aerated digestion with a belt press dewatering system. The hydraulic capacity is 2.0 MGD and the organic capacity is 5421 lbs BOD₅/day, which were specified in Site Approval #4931, dated June 29, 2007. That document should be referred to for any additional information.

Pursuant to Section 100.5.2 of the Water and Wastewater Facility Operator Certification Requirements, this facility will require a certified operator. If the facility has a question on the level of the certified operator it needs then the facility will need to contact the Engineering Section of the Division.

E. Biosolids Treatment and Disposal

Biosolids are treated to meet EPA 503 Class B regulations. Approximately 305 dry metric tons /yr are generated and transported to a compost facility for disposal.

1. EPA General Permit

EPA Region 8 issued a General Permit for Colorado facilities whose operations generate, treat, and/or use/dispose of sewage sludge by means of land application, landfill, and surface disposal under the National Pollutant Discharge Elimination System. All Colorado facilities are required to apply for and to obtain coverage under the EPA General Permit when /if applicable.

2. Biosolids Regulation (Regulation No. 64, Colorado Water Quality Control Commission)

While the EPA is now the issuing agency for biosolids permits, Colorado facilities that land apply biosolids must comply with requirements of Regulation No. 64, such as the submission of annual reports as discussed later in this rationale.

V. PERFORMANCE HISTORY

A. Monitoring Data

1. Discharge Monitoring Reports – The following tables summarize the effluent data reported on the Discharge Monitoring Reports (DMRs) for the previous permit term, from December 2009 through July 2014.

Table V-1 – Summary of DMR Data for Permitted Feature 001A

Parameter	# Samples or Reporting Periods	Reported Average Concentrations Avg/Min/Max	Reported Maximum Concentrations Avg/Min/Max	Previous Avg/Max/AD Permit Limit	Number of Limit Excursions
Effluent Flow (MGD)	55	0.84/0.65/1.9	1.1/0.75/2.4	2/NA	
Temp Daily Max (°C) April-Oct	32		20/14/23	NA/NA	
Temp Daily Max (°C) Nov-March	20		13/10/17	NA/NA	
Temp MWAT (°C) April-Oct	32	19/14/23		NA/NA	
Temp MWAT (°C) Nov-March	20	12/9/17		NA/NA	
pH (su)	56	7.2/6.5/7.6	8/7.6/8.5	NA - NA	
E. coli (#/100 ml)	56	5.9/1.3/37	15/1.8/1046	2000/NA	
TRC (mg/l)	18	0/0/0	0/0/0	0.011/NA	
NH3 as N, Tot (mg/l) Jan	5	0.34/0.02/1.4	2/0.04/9.5	3.7/10.3	
NH3 as N, Tot (mg/l) Feb	5	0.066/0.02/0.11	0.19/0.04/0.33	3.4/9	
NH3 as N, Tot (mg/l) Mar	5	0.19/0.04/0.48	0.72/0.06/2	2.4/5.6	
NH3 as N, Tot (mg/l) Apr	5	0.6/0.03/2.7	1.3/0.05/5.8	2.8/6.8	
NH3 as N, Tot (mg/l) May	5	0.086/0.02/0.18	0.23/0.05/0.6	3.5/10.3	
NH3 as N, Tot (mg/l) Jun	5	0.19/0.06/0.59	0.36/0.07/0.85	2.9/11.1	
NH3 as N, Tot (mg/l) Jul	5	0.24/0.04/0.63	0.53/0.04/1.7	2.7/15.3	
NH3 as N, Tot (mg/l) Aug	4	0.33/0.07/0.88	0.87/0.1/2.2	2.6/13.3	
NH3 as N, Tot (mg/l) Sep	4	0.13/0.06/0.26	0.44/0.15/1.1	3.9/15.3	
NH3 as N, Tot (mg/l) Oct	4	0.22/0.04/0.47	0.77/0.05/1.6	4.4/13.3	
NH3 as N, Tot (mg/l) Nov	4	0.11/0.03/0.2	0.43/0.06/0.86	3.4/8.9	
NH3 as N, Tot (mg/l) Dec	5	0.3/0.03/1	0.92/0.05/2.4	2.8/6.8	
BOD5, influent (mg/l)	56	302/227/429	374/244/659	NA/NA/	
BOD5, influent (lbs/day)	56	2198/1539/3592	2765/1653/6645	NA/NA/	
CBOD5, influent (mg/l)	56	269/198/344	332/224/583	NA/NA/	
CBOD5, effluent (mg/l)	56	2.8/1/10	3.7/1/14	25/40/	
CBOD5 (% removal)	56	99/97/100	NA/NA/NA	85/NA/	
TSS, influent (mg/l)	56	440/245/1432	701/260/5049	NA/NA/	
TSS, effluent (mg/l)	56	6.2/1.3/36	10/1.6/63	30/45/	
TSS (% removal)	56	98/85/100	NA/NA/NA	NA/NA/	
PWS intake (mg/l)	58	536/114/956	NA/NA/NA	NA/NA/	
WWTF effluent (mg/l)	56	1060/15/1359	1076/71/1380	NA/NA/	
As, TR (µg/l)	38	33/0/671	1.7/0/9.1	NA/NA	
As, Dis (µg/l)	21	NA/NA/NA	38/0/354	NA/NA	
Cr+3, Dis (µg/l)	56	0/<1/0	0/<1/0	NA/NA	
Cr+6, Dis (µg/l)	55	0/0/0	0/0/0	NA/NA	
Cu, Dis (µg/l)	52	17/5.5/126	17/6/126	17/28	
CN, Free (µg/l)	58	NA/NA/NA	0.0003/<5/0.02	NA/5	
Fe, TR (µg/l)	56	178/0/904	NA/NA/NA	1000/NA	
Pb, Dis (µg/l)	55	3.6/0/70	3.6/0/70	5.76/50	
Mn, Dis (µg/l)	56	24/2.4/108	24/2.4/108	2132/NA	
Ni, Dis (µg/l)	54	5.6/0/90	5.4/0/90	NA/NA	
Se, Dis (µg/l)	55	6.4/0/147	6.2/0/147	NA/NA	
Ag, Dis (µg/l)	56	0.98/0/24	0.98/0/24	0.28/7.63	
Zn, Dis (µg/l)	56	54/14/406	54/14/406	240/276	
WET, chronic					
pimephales lethality, Stat Diff	18	//	100/100/100	NA	
pimephales lethality, IC25	18	//	100/100/100		
ceriodaphnia lethality, Stat Diff	18	//	100/100/100	NA	
ceriodaphnia lethality, IC25	18	//	100/100/100		
pimephales toxicity, Stat Diff	18	//	100/100/100	Report	
pimephales toxicity, IC25	18	//	100/100/100		
ceriodaphnia toxicity, Stat Diff	18	//	100/100/100	Report	
ceriodaphnia toxicity, IC25	18	//	100/100/100		

*The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum" column;

*The temperature data shows the MWAT values in the "average" column, and the daily maximum reported values in the "maximum" column

|| ** Geometric mean; NA means Not Applicable

B. Compliance With Terms and Conditions of Previous Permit

1. Effluent Limitations –The data shown in the preceding table(s) indicate apparent violations of the permit. These violations were addressed by the Division in an NOV issued on 9/9/2010: MO-100909-2. The permittee subsequently amended the permit the address the issues regarding metals.

In accordance with 40 CFR Part 122.41(a), any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

VI. DISCUSSION OF EFFLUENT LIMITATIONS

A. Regulatory Basis for Limitations

1. Technology Based Limitations
 - a. Federal Effluent Limitation Guidelines – The Federal Effluent Limitation Guidelines for domestic wastewater treatment facilities are the secondary treatment standards. These standards have been adopted into, and are applied out of, Regulation 62, the Regulations for Effluent Limitations.
 - b. Regulation 62: Regulations for Effluent Limitations – These Regulations include effluent limitations that apply to all discharges of wastewater to State waters and are shown in Section VIII of the WQA. These regulations are applicable to the discharge from the City of Rifle WWTF.
2. Numeric Water Quality Standards - The WQA contains the evaluation of pollutants limited by water quality standards. The mass balance equation shown in Section VI of the WQA was used for most pollutants to calculate the potential water quality based effluent limitations (WQBELs), M_2 , that could be discharged without causing the water quality standard to be violated. For ammonia, the AMMTOX Model was used to determine the maximum assimilative capacity of the receiving stream. A detailed discussion of the calculations for the maximum allowable concentrations for the relevant parameters of concern is provided in Section VI of the Water Quality Assessment developed for this permitting action.

The maximum allowable pollutant concentrations determined as part of these calculations represent the calculated effluent limits that would be protective of water quality. These are also known as the water quality-based effluent limits (WQBELs). Both acute and chronic WQBELs may be calculated based on acute and chronic standards, and these may be applied as daily maximum (acute) or 30-day average (chronic) limits.
3. Narrative Water Quality Standards - Section 31.11(1)(a)(iv) of The Basic Standards and Methodologies for Surface Waters (Regulation No. 31) includes the narrative standard that State surface waters shall be free of substances that are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life.

- a. Whole Effluent Toxicity - The Water Quality Control Division has established the use of WET testing as a method for identifying and controlling toxic discharges from wastewater treatment facilities. WET testing is being utilized as a means to ensure that there are no discharges of pollutants "in amounts, concentrations or combinations which are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life" as required by Section 31.11 (1) of the Basic Standards and Methodologies for Surface Waters. The requirements for WET testing are being implemented in accordance with Division policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010). Note that this policy has recently been updated and the permittee should refer to this document for additional information regarding WET.

4. Water Quality Regulations, Policies, and Guidance Documents

- a. Antidegradation - Since the receiving water is Undesignated, an antidegradation review is required pursuant to Section 31.8 of The Basic Standards and Methodologies for Surface Water. As set forth in Section VII of the WQA, an antidegradation evaluation was conducted for pollutants when water quality impacts occurred and when the impacts were significant. Based on the antidegradation requirements and the reasonable potential analysis discussed below, antidegradation-based average concentrations (ADBACs) may be applied.

According to Division procedures, the facility has three options related to antidegradation-based effluent limits: (1) the facility may accept ADBACs as permit limits (see Section VII of the WQA); (2) the facility may select permit limits based on their non-impact limit (NIL), which would result in the facility not being subject to an antidegradation review and thus the antidegradation-based average concentrations would not apply (the NILs are also contained in Section VII of the WQA); or (3) the facility may complete an alternatives analysis as set forth in Section 31.8(3)(d) of the regulations which would result in alternative antidegradation-based effluent limitations.

The effluent must not cause or contribute to an exceedance of a water quality standard and therefore the WQBEL must be selected if it is lower than the NIL. Where the WQBEL is not the most restrictive, the discharger may choose between the NIL or the ADBAC: the NIL results in no increased water quality impact; the ADBAC results in an "insignificant" increase in water quality impact. The ADBAC limits are imposed as two-year average limits.

- b. Antibacksliding – As the receiving water is designated Reviewable or Outstanding, and the Division has performed an antidegradation evaluation, in accordance with the Antidegradation Guidance, the antibacksliding requirements in Regulation 61.10 have been met.
- c. Determination of Total Maximum Daily Loads (TMDLs) – This stream segment is not on the State's 303(d) list, and therefore TMDLs do not apply.
- d. Colorado Mixing Zone Regulations – Pursuant to section 31.10 of The Basic Standards and Methodologies for Surface Water, a mixing zone determination is required for this permitting action. The Colorado Mixing Zone Implementation Guidance, dated April 2002, identifies the process for determining the meaningful limit on the area impacted by a discharge to surface water where standards may be exceeded (i.e., regulatory mixing zone). This guidance document provides for certain exclusions from further analysis under the regulation, based on site-specific conditions.

The guidance document provides a mandatory, stepwise decision-making process for determining if the permit limits will not be affected by this regulation. Exclusion, based on Extreme Mixing Ratios, may be granted if the ratio of the facility design flow to the chronic low flow (30E3) is greater than 2:1. Since the ratio of the chronic low flow to the design flow is 298:1, and because most parameter limitations do not allow mixing because of Threatened and Endangered designation, the permittee is eligible for an exclusion from further analysis under the regulation.

- e. Salinity Regulations – In compliance with the Colorado River Salinity Standards and the Colorado Discharge Permit System Regulations, the permittee shall monitor for total dissolved solids on a **Monthly** basis. Samples shall be taken at Permitted Feature 001A.

An evaluation of the discharge of total dissolved solids indicates that the City of Rifle facility exceeds the threshold of 1 ton/day or 350 tons/year of salinity. To determine the TDS loading from this facility, the average reported TDS values were multiplied by the average flow, then by 8.34. The average was determined to be 3.7 tons/day which exceed the daily load. No recent influent data was reported in the DMRs and therefore, the Division was not able to calculate the incremental increase of salinity of 400 mg/l or less on a recent dataset. However the data provided by the facility dating from Jan 1, 2003 to Jan 1, 2008 indicated the incremental increase of salinity is 523 mg/l, exceeding the limit of 400 mg/l. Therefore, the Division will include a salinity report requirement at this time. If the facility provides recent influent salinity during the public notice of this permit then the Division will reconsider/recalculate the incremental increase of salinity and incorporate the findings into the permit if applicable.

In conformance with section 61.8(2)(l)(vi)(A)(I) of the Colorado Discharge Permit System Regulations, the permittee must submit a report that documents whether it is feasible to treat to these levels. The Salinity Regulations allow for the waiver of TDS limitations upon submittal of a report that demonstrates that achievement of zero salt loading or, in the event that is not achievable, discharge of less than one ton per day, is not economically feasible. There is no record that the permittee has previously submitted this report. If a report has previously been submitted, the permittee should submit a copy of this report. Monthly monitoring for total dissolved solids will continue regardless.

- g. Reasonable Potential Analysis – Using the assimilative capacities contained in the WQA, an analysis must be performed to determine whether to include the calculated assimilative capacities as WQBELs in the permit. This reasonable potential (RP) analysis is based on the Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, dated December, 2002. This guidance document utilizes both quantitative and qualitative approaches to establish RP depending on the amount of available data.

A qualitative determination of RP may be made where ancillary and/or additional treatment technologies are employed to reduce the concentrations of certain pollutants. Because it may be anticipated that the limits for a parameter could not be met without treatment, and the treatment is not coincidental to the movement of water through the facility, limits may be included to assure that treatment is maintained.

A qualitative RP determination may also be made where a federal ELG exists for a parameter, and where the results of a quantitative analysis results in no RP. As the federal ELG is typically

less stringent than a limitation based on the WQBELs, if the discharge was to contain concentrations at the ELG (above the WQBEL), the discharge may cause or contribute to an exceedance of a water quality standard.

To conduct a quantitative RP analysis, a minimum of 10 effluent data points from the previous 5 years, should be used. The equations set out in the guidance for normal and lognormal distribution, where applicable, are used to calculate the maximum estimated pollutant concentration (MEPC). For data sets with non-detect values, and where at least 30% of the data set was greater than the detection level, MDLWIN software is used consistent with Division guidance to generate the mean and standard deviation, which are then used to establish the multipliers used to calculate the MEPC. If the MDLWIN program cannot be used the Division's guidance prescribes the use of best professional judgment.

For some parameters, recent effluent data or an appropriate number of data points may not be available, or collected data may be in the wrong form (dissolved vs total) and therefore may not be available for use in conducting an RP analysis. Thus, consistent with Division procedures, monitoring will be required to collect samples to support a RP analysis and subsequent decisions for a numeric limit. A compliance schedule may be added to the permit to require the request of an RP analysis once the appropriate data have been collected.

For other parameters, effluent data may be available to conduct a quantitative analysis, and therefore an RP analysis will be conducted to determine if there is RP for the effluent discharge to cause or contribute to exceedances of ambient water quality standards. The guidance specifies that if the MEPC exceeds the maximum allowable pollutant concentration (MAPC), limits must be established and where the MEPC is greater than half the MAPC (but less than the MAPC), monitoring must be established. Table VI-1 contains the calculated MEPC compared to the corresponding MAPC, and the results of the reasonable potential evaluation, for those parameters that met the data requirements. The RP determination is discussed for each parameter in the text below.

Table VI-1 – Quantitative Reasonable Potential Analysis

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	Reasonable Potential	MEPC	WQBEL (MAPC)	Reasonable Potential
Temp Daily Max (°C) April-Oct					24	Monitor
Temp Daily Max (°C) Nov-March					13	Monitor
Temp MWAT (°C) April-Oct		18	Monitor			
Temp MWAT (°C) Nov-March		9	Monitor			
E. coli (#/100 ml)	41	2000	Yes(Qual)	1151	4000	Yes(Qual)
TRC (mg/l)	NA	0.011	Yes (Qual)	NA	0.019	Yes (Qual)
NH3 as N, Tot (mg/l) Jan	1.4	3.5	Yes(Qual)	9.5	5.3	Yes(Qual)
NH3 as N, Tot (mg/l) Feb	0.11	3.2	Yes(Qual)	0.33	4.9	Yes(Qual)
NH3 as N, Tot (mg/l) Mar	0.48	3.6	Yes(Qual)	2.0	5.5	Yes(Qual)
NH3 as N, Tot (mg/l) Apr	2.7	3.1	Yes(Qual)	5.8	4.7	Yes(Qual)
NH3 as N, Tot (mg/l) May	0.18	3.1	Yes(Qual)	0.6	4.3	Yes(Qual)
NH3 as N, Tot (mg/l) Jun	0.59	3.2	Yes(Qual)	0.85	4.3	Yes(Qual)
NH3 as N, Tot (mg/l) Jul	0.63	3.2	Yes(Qual)	1.7	4.1	Yes(Qual)
NH3 as N, Tot (mg/l) Aug	0.88	3.1	Yes(Qual)	2.2	4.1	Yes(Qual)
NH3 as N, Tot (mg/l) Sep	0.26	3.0	Yes(Qual)	1.1	4.0	Yes(Qual)
NH3 as N, Tot (mg/l) Oct	0.47	3.0	Yes(Qual)	1.6	4.0	Yes(Qual)
NH3 as N, Tot (mg/l) Nov	0.2	3.1	Yes(Qual)	0.86	4.2	Yes(Qual)
NH3 as N, Tot (mg/l) Dec	1	3.4	Yes(Qual)	2.4	4.9	Yes(Qual)
As, TR (µg/l) **	2	6	No (Qual)			
As, Dis (µg/l)*				6.6	340	No (Qual)
Cd, Dis (µg/l)*	0.11	0.75	No (Qual)	0.11	3.3	No (Qual)
Cr+3, Dis (µg/l)	ND	138	No	ND	1062	No
Cr+6, Dis (µg/l)	ND	11	No	ND	16	No
Cu, Dis (µg/l)	139	17	Yes	139	28	Yes
CN, Free (µg/l)				0.02	5	No
Fe, TR (µg/l)	994	1000	Monitor			
Pb, Dis (µg/l)*	2.5	5.7	No (Qual)	2.5	146	No (Qual)
Mn, Dis (µg/l)	119	2125	No	119	3847	No
Hg, Tot (µg/l)	NA	3	No (Qual)			
Ni, Dis (µg/l)*	5	99	No (Qual)	5	891	No
Se, Dis (µg/l)	162	4.6	Yes	206	18	Yes
Ag, Dis (µg/l)*	0.036	0.28	No (Qual)	0.036	7.5	No (Qual)
Zn, Dis (µg/l)*	78	242	No (Qual)	78	320	No (Qual)
Nonylphenol (µg/l)	NA	7	Monitor	NA	28	Monitor

*Lab data from 12/2009 through 6/2010 was much higher than data after 6/2010, when the analytical lab was changed. This higher data causes MEPC to be higher. MEPC represents the maximum concentration since 6/2010.

**Temp modification applies

B. Parameter Evaluation

BOD₅ – The BOD₅ concentrations in Reg 62 are the most stringent effluent limits and are therefore applied. The removal percentages for BOD₅ also apply based on the Regulations for Effluent Limitations. These limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

Total Suspended Solids – The TSS concentrations in Reg 62 are the most stringent effluent limits and

are therefore applied. These limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

Oil and Grease – The oil and grease limitations from the Regulations for Effluent Limitations are applied as they are the most stringent limitations. This limitation is the same as those contained in the previous permit and is imposed upon the effective date of this permit.

pH – This parameter is limited by the water quality standards of 6.5-9.0 s.u., as this range is more stringent than other applicable standards. This limitation is the same as that contained in the previous permit and is imposed upon the effective date of this permit.

E. Coli – The calculated E. Coli WQBEL in the WQA is greater than that allowed by the Division procedure for E. coli, which specifies a maximum of 2,000 organisms per 100 ml (30-day geometric mean) and 4,000 organisms per 100 ml (7-day geometric mean). A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter. These limitations are the same as those contained in the previous permit and previous monitoring as shown in Table V-1 indicate that this limitation can be met and is therefore imposed upon the effective date of the permit.

Total Residual Chlorine (TRC) – The limitation for TRC is based upon the WQBEL as described in the WQA. A qualitative determination of RP has been made as chlorine may be used in the treatment process. This is the same limitation as in the previous permit and is therefore imposed upon the effective date of the permit.

Ammonia – The limitation for ammonia is based upon the WQBEL. A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter. The new monthly limitations are similar for the 30 day average limitation and more stringent than previous limitations for the daily maximum. The monthly ammonia results have typically been less than 1.0, however several months during 2013 indicated results greater than 1.0 for the daily maximum. Specifically January 2013 indicated 9.5 mg/l and 5.8 mg/l for April for the daily maximum and the new daily maximum limitations for those month are 5.3 mg/l and 4.7 mg/l. A compliance schedule would typically be provided, **however the permittee stated in conversation on 11/6/2014 that the monthly limitations can be met and a compliance schedule is not needed for this parameter.** The monthly limitations are therefore imposed upon the effective date of the permit.

Total Recoverable Arsenic – The RP analysis for total recoverable arsenic was based upon the WQBEL as described in the WQA. Additionally, the previous permit provided a compliance schedule and requirement to determine the reason for the previous high arsenic readings. **The permittee stated in correspondence dated June 20, 2011 that after changing laboratories in May 2010, the results did not exceed 2.2 ug/l with a permit limitation of 6.3 ug/l. Conversation with the permittee on 11/6/2014 indicated that the previous lagoon water was process through the new WWTF during the first several operating months of the new plant and perhaps accounts for the spike in some metals and then a sharp decrease in concentrations after June 2010.** Monitoring, from 5/31/2010 through 6/30/2014 indicated only 12 results above detection limit with a range of 0.61 – 2.0 ug/l and 20 results were below detection limit with a PQL of 0.2 ug/l. **Therefore, the Division made a qualitative no RP for this parameter and no limitation will be added to the permit.**

Dissolved Arsenic – The RP analysis for dissolved arsenic was based upon the WQBEL as described in the WQA. The MEPC was greater than the MAPC and therefore limitations are required. Therefore a,

daily maximum requirement has been added to the permit. Monitoring after 4/30/2014, indicate that this limitation can be met. Five data points collected before 5/31/2010 ranged from 25-354 ug/l and is represented in Table VI-1, but it not reflective of the past four years of data results, which have been below 6.6 ug/l. **Therefore, the Division made a qualitative no RP for this parameter and no limitation will be added to the permit.**

Potentially Dissolved Cadmium – The RP analysis for potentially dissolved cadmium was based upon the WQBEL as described in the WQA. All data (49 points) since 4/30/2010 were below detection limit except for one data point on 11/30/2011 at 0.11 ug/l compared to a limitation of 0.75 ug/l and 3.3 ug/l for the 30-day and daily max. The PQL was 0.1 ug/l. **Therefore, the Division made a qualitative no RP for this parameter and no limitation will be added to the permit.**

Potentially Dissolved Trivalent Chromium – The RP analysis for potentially dissolved trivalent chromium was based upon the WQBEL as calculated in the WQA. All monthly data since 12/31/2009 was below detection level with a PQL of 2 ug/l. Therefore limitations are not necessary at this time.

Dissolved Hexavalent Chromium – The RP analysis for dissolved hexavalent chromium was based upon the WQBEL as calculated in the WQA. All monthly data since 12/31/2009 was below detection level with a PQL of 20 ug/l. Therefore limitations are not necessary at this time based on a qualitative no RP.

Potentially Dissolved Copper – The RP analysis for potentially dissolved copper was based upon the WQBEL as described in the WQA. The MEPC was greater than the MAPC and therefore limitations are required. Therefore a, 30-day average and daily maximum requirement have been added to the permit. These limitations are the same as those contained in the previous permit and are therefore imposed upon the effective date of the permit.

Cyanide – The RP analysis for cyanide was based upon the WQBEL as calculated in the WQA. All data since 12/31/2009 is below detection level except for one data point. The PQL was 5 ug/l. The MEPC was less than half of the MAPC and therefore limitations are not necessary at this time.

Total Recoverable Iron – The RP analysis for total recoverable iron was based upon the WQBEL as described in the WQA. With the available data the MDLWIN program was used to determine the appropriate statistics to determine the MEPC. The MEPC was greater than half the MAPC for the 30-day average. Therefore a 30-day average monitoring requirement has been added to the permit.

Potentially Dissolved Lead – The RP analysis for potentially dissolved lead was based upon the WQBEL as described in the WQA. All data (49 points) since 4/30/2010 were below detection limit except for two data points on 4/30/2013 at 2.5 ug/l and 10/31/2011 at 0.26 ug/l compared to a limitation of 0.75 ug/l and 3.3 ug/l for the 30-day and daily max. The PQL was 0.1 ug/l. **Therefore, the Division made a qualitative no RP for this parameter and no limitation will be added to the permit.**

Potentially Dissolved Manganese – The RP analysis for potentially dissolved manganese was based upon the WQBEL as calculated in the WQA. With the available data, the normal program was used to determine the appropriate statistics to determine the MEPC. The MEPC was less than half of the MAPC and therefore limitations are not necessary at this time.

Total Mercury – The RP analysis for total mercury was based upon the WQBEL as calculated in the WQA. The MAPC is 3.0 ug/l, which is a large concentration for mercury. The previous factsheet for Modification #2 stated that the mercury limitation was removed from the permit because the highest

recorded effluent concentration for mercury was 0.22 ug/l. The determination of no RP is being continued for this permit term. Therefore, limitations are not necessary at this time.

Potentially Dissolved Nickel – The RP analysis for potentially dissolved nickel was based upon the WQBEL as described in the WQA. All data (49 points) since 4/30/2010 were below detection limit except for one data point on 10/31/2011 at 5 ug/l compared to a PQL was 2.0 ug/l. **Therefore, the Division made a qualitative no RP for this parameter and no limitation will be added to the permit.**

Potentially Dissolved Selenium – The RP analysis for potentially dissolved selenium was based upon the WQBEL as described in the WQA. The MEPC was greater than the MAPC and therefore limitations are required. A 30-day average and daily maximum requirement has been added to the permit. This limitation is more stringent than the previous limit typically a compliance schedule would be provided. **However, the permittee stated in conversation on 11/6/2014 that this limitation can be met and a compliance schedule is not needed for this parameter.** This limitation is therefore imposed upon the effective date of the permit.

Potentially Dissolved Silver – The RP analysis for potentially dissolved silver was based upon the WQBEL as described in the WQA. All data (49 points) since 4/30/2010 were below detection limit except for one data point on 9/30/2011 at 0.036 ug/l compared to a limitation of 0.28 ug/l and 7.63 ug/l for the 30-day and daily max. The PQL was 0.1 ug/l. **Therefore, the Division made a qualitative no RP for this parameter and no limitation will be added to the permit.**

Potentially Dissolved Zinc – The RP analysis for potentially dissolved zinc was based upon the WQBEL as described in the WQA. All data (49 points) since 4/30/2010 are approximately 25% of the limitation. Seven data points collected before 7/31/2010 ranged from 63-406 ug/l. **Therefore, the Division made a qualitative no RP for this parameter and no limitation will be added to the permit.**

Temperature – The MWAT is the maximum weekly average temperature, as determined by a seven day rolling average, using at least 3 equally spaced temperature readings in a 24-hour day (at least every 8 hours for a total of at least 21 data points).

The daily maximum is defined as the maximum 2 hour average, with a minimum of 12 equally spaced measurements throughout the day.

Although there is more than 10:1 dilution, which would normally exclude the WWTF from temperature limitations, the facility is discharging to a T&E listed segment and therefore limitations for most parameters are based on a zero low flow situation and temperature limitations apply. MWAT data was collected during the previous permit term. However, no representative ambient water temperature data was available for calculating temperature WQBELs. Therefore, the Division will include in the permit an in-stream data collection requirement to ensure that enough ambient data has been collected for the next renewal. This will provide enough effluent and ambient data for a proper RP analysis.

Organics – The effluent is not expected or known to contain organic chemicals, and therefore, limitations for organic chemicals are not needed in this permit.

Whole Effluent Toxicity (WET) Testing – For this facility, chronic WET testing has been determined to be applicable based on the instream waste concentrations calculated in the WQA.

This facility discharges ammonia, can cause toxicity at low concentrations. In addition, because Rifle WWTF has commercial contributors, there is potential toxicity for the facility.

The permittee should read the WET testing section of Part I of the permit carefully, as this information has been updated in accordance with the Division's updated policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010). The permit outlines the test requirements and the required follow-up actions the permittee must take to resolve a toxicity incident. The permittee should also read the above mentioned policy which is available on the Permit Section website. The permittee should be aware that some of the conditions outlined above may be subject to change if the facility experiences a change in discharge, as outlined in Part II.A.2. of the permit. Such changes shall be reported to the Division immediately.

C. Parameter Speciation

Dissolved Metals / Potentially Dissolved

For metals with aquatic life-based dissolved standards, effluent limits and monitoring requirements are typically based upon the potentially dissolved method of analysis, as required under Regulation 31, Basic Standards and Methodologies for Surface Water. Thus, effluent limits and/or monitoring requirements for these metals will be prescribed as the "potentially dissolved" form.

VII. ADDITIONAL TERMS AND CONDITIONS

A. **Monitoring**

Effluent Monitoring – Effluent monitoring will be required as shown in the permit document. Refer to the permit for locations of monitoring points. Monitoring requirements have been established in accordance with the frequencies and sample types set forth in the Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Industrial and Domestic Wastewater Treatment Facilities. This policy includes the methods for reduced monitoring frequencies based upon facility compliance as well as for considerations given in exchange for instream monitoring programs initiated by the permittee. Table VII-1 shows the results of the reduced monitoring frequency analysis for Permitted Feature 001A, based upon compliance with the previous permit.

Table VII-1 – Monitoring Reduction Evaluation

<i>Parameter</i>	<i>Proposed Permit Limit</i>	<i>Average of 30-Day (or Daily Max) Average Conc.</i>	<i>Standard Deviation</i>	<i>Long Term Characterization (LTC)</i>	<i>Reduction Potential</i>
<i>pH (su) Minimum</i>	<i>min 6.5</i>	7	0.13	6.74	<i>1 Step</i>
<i>pH (su) Maximum</i>	<i>max 9.0</i>	7.8	0.13	8.06	
<i>E. coli (#/100 ml)</i>	2000	5	6.4	17.8	<i>3 Levels</i>
<i>NH₃ as N, Tot (mg/l)*</i>	3.0	0.4	0.62	1.64	<i>3 Levels</i>
<i>CBOD₅, effluent (mg/l)</i>	25	2.9	0.82	4.54	<i>3 Levels</i>
<i>TSS, effluent (mg/l)</i>	30	6.3	2.1	10.5	<i>3 Levels</i>
<i>Fe, TR (µg/l)</i>	1000	96	146	388	<i>3 Levels</i>
<i>Se, Dis (µg/l)</i>	4.6	0.72	1.2	3.12	<i>2 Levels</i>

*For Monthly ammonia, all months except April were a 3 level reduction. Therefore a 3 level reduction was applied to all months.

B. Reporting

1. Discharge Monitoring Report – The City of Rifle facility must submit Discharge Monitoring Reports (DMRs) on a monthly basis to the Division. These reports should contain the required summarization of the test results for all parameters and monitoring frequencies shown in Part I.A.2 of the permit. See the permit, Part I.D for details on such submission.
2. Special Reports – Special reports are required in the event of an upset, bypass, or other noncompliance. Please refer to Part II.A. of the permit for reporting requirements. As above, submittal of these reports to the US Environmental Protection Agency Region VIII is no longer required.
3. Additional Reporting – Salinity study

C. Signatory and Certification Requirements

Signatory and certification requirements for reports and submittals are discussed in Part I.D.8. of the permit.

D. Additional Permit Requirements

The Use of the Pretreatment Framework to identify, characterize, and control sources of Pollutants to POTWs

The Division determined that the pretreatment framework and its implementation is the most appropriate tool to identify, characterize, and control sources into the Rifle POTW. The Division made this change to the Rifle WWTF permit to include a once per year sampling for the listed parameters.

Permit provisions differ for POTWs required to maintain a pretreatment program and for POTWs not required to maintain a pretreatment program. POTWs that are required to maintain a pretreatment program are required to identify and locate all possible industrial users (“IUs”), identify the character and volume of pollutants, maintain current information regarding IUs and conduct periodic pollutant scans of both influent and effluent for a list of parameters referenced in 40 CFR 403.

POTWs not required to maintain a pretreatment program are not held to this level of requirement, and as such are less likely to identify and locate all possible industrial users (“IUs”), identify the character and volume of pollutants, maintain current information regarding IUs and conduct periodic pollutant scans of both influent and effluent. In this case, the Division has decided to require periodic pollutant scans of effluent *even though Rifle WWTF is not required to maintain a pretreatment program*. For Rifle WWTF, this change will aid in identifying unknown and unauthorized dischargers and characterizing the effluent quality.

EPA provided the following permit language for POTWs without approved programs, which the Division has included in this permitting action:

The Permittee shall sample and analyze the effluent for the following pollutants:

Total Arsenic
Total Cadmium

Total Nickel
Total Selenium

Total Chromium	Total Silver
Total Copper	Total Zinc
Total Lead	Total Cyanide
Total Mercury	Total Phenols
Total Molybdenum	

F. Stormwater

Pursuant to 5 CCR 1002-61.3(2), wastewater treatment facilities with a design flow of 1.0 mgd or more, or that are required to have an approved pretreatment program, are specifically required to obtain stormwater discharge permit coverage or a Stormwater No Exposure Certification, in order to discharge stormwater from their facilities to state waters. The stormwater discharge permit applicable to wastewater treatment facilities is the CDPS General Permit for Stormwater Discharges Associated with Non-Extractive Industrial Activity.

Division records indicate that City of Rifle applied for and obtained coverage under a Stormwater No Exposure Certification for the Rifle Regional Wastewater Reclamation Facility. The No Exposure Certification number is CONOX0345.

G. Economic Reasonableness Evaluation

Section 25-8-503(8) of the revised (June 1985) Colorado Water Quality Control Act required the Division to "determine whether or not any or all of the water quality standard based effluent limitations are reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons, and are in furtherance of the policies set forth in sections 25-8-192 and 25-8-104."

The Colorado Discharge Permit System Regulations, Regulation No. 61, further define this requirement under 61.11 and state: "Where economic, environmental, public health and energy impacts to the public and affected persons have been considered in the classifications and standards setting process, permits written to meet the standards may be presumed to have taken into consideration economic factors unless:

- a. A new permit is issued where the discharge was not in existence at the time of the classification and standards rulemaking, or
- b. In the case of a continuing discharge, additional information or factors have emerged that were not anticipated or considered at the time of the classification and standards rulemaking."

The evaluation for this permit shows that the Water Quality Control Commission, during their proceedings to adopt the Classifications and Numeric Standards for Lower Colorado River Basin, considered economic reasonableness.

Furthermore, this is not a new discharger and no new information has been presented regarding the classifications and standards. Therefore, the water quality standard-based effluent limitations of this permit are determined to be reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons and are in furtherance of the policies set forth in Sections 25-8-102 and 104. If the permittee disagrees with this finding, pursuant to 61.11(b)(ii) of the Colorado Discharge Permit System Regulations, the permittee should submit all pertinent information to the

Division during the public notice period.

Michelle DeLaria
11/6/2014

VIII. REFERENCES

- A. Colorado Department of Public Health and Environment, Water Quality Control Division Files, for Permit Number CO0048151.
- B. “Design Criteria Considered in the Review of Wastewater Treatment Facilities”, Policy 96-1, Colorado Department of Public Health and Environment, Water Quality Control Commission, April 2007.
- C. Basic Standards and Methodologies for Surface Water, Regulation No. 31, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 31, 2013.
- D. Classifications and Numeric Standards for Lower Colorado River Basin, Regulation No. 37, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective December 31, 2014.
- E. Colorado Discharge Permit System Regulations, Regulation No. 61, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 30, 2012.
- F. Regulations for Effluent Limitations, Regulation No. 62, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective July 30, 2012.
- G. Pretreatment Regulations, Regulation No. 63, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective April 01, 2007.
- H. Biosolids Regulation, Regulation No. 64, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective June 30, 2014.
- I. Colorado River Salinity Standards, Regulation No. 39, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective August 30, 1997.
- J. Section 303(d) List of Water Quality Limited Segments Requiring TMDLs, Regulation No 93, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2012.
- K. Colorado’s Section 303(d) List of Impaired Waters and Monitoring and Evaluation List, Regulation No 93, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2012.
- L. Antidegradation Significance Determination for New or Increased Water Quality Impacts, Procedural Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December 2001.

- M. Memorandum Re: First Update to (Antidegradation) Guidance Version 1.0, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 23, 2002.
- N. Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, Policy Number CW-1, Colorado Department of Public Health and Environment, Water Quality Control Division, effective November 18, 2013.
- O. The Colorado Mixing Zone Implementation Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 2002.
- P. Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Domestic and Industrial Wastewater Treatment Facilities, Water Quality Control Division Policy WQP-20, May 1, 2007.
- Q. Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops, Water Quality Control Division Policy WQP-24, March 10, 2008.
- R. Implementing Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (WET) Testing, Colorado Department of Public Health and Environment, Water Quality Control Division Policy Permits-1, September 30, 2010.
- S. Policy for Conducting Assessments for Implementation of Temperature Standards in Discharge Permits, Colorado Department of Public Health and Environment, Water Quality Control Division, Policy Number WQP-23, effective July 3, 2008.
- T. Permit Compliance Schedules, Colorado Department Public Health and Environment, Water Quality Control Division Policy Number CW-3, effective March 4, 2014.
- U. Procedural Regulations for Site Applications for Domestic Wastewater Treatment Works, Regulation No. 22, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective September 30, 2009.
- V. Regulation Controlling discharges to Storm Sewers, Regulation No. 65, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective May 30, 2008.
- W. Water and Wastewater Facility Operator Certification Requirements, Regulation No. 100, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective June 30, 2012.